

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Rodney Daughtry Art Unit : 3639  
Serial No. : 09/812,224 Examiner : Thomas Dixon  
Filed : March 19, 2001 Conf. No. : 9468  
Title : FARE RULES SUMMARIZER FOR TRAVEL PLANNING

Mail Stop Appeal Brief - Patents

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

## REPLY BRIEF

Pursuant to 37 C.F.R. §41.41, Applicant responds to the Examiner's Answer as follows:

#### Non-statutory subject matter

Appellant has not argued that "user interface" is a statutory class. Rather, Appellants argued that: "the claims are not drawn to an interface per se as a statutory class but rather are drawn to an article of manufacture, namely an interface displayed on a monitor."

The examiner also argues that: "Applicant's claimed 'user interface,' is not operated, as argued, but is simply a display on a screen, with no functionality to be operated, and is seen to be nonfunctional descriptive material, not an article of manufacture."

Appellant disagrees and contends that in view of recent court decisions such as *AT&T v. Excel* at 1453 while acknowledging that: "A mathematical formula alone, sometimes referred to as a mathematical algorithm, viewed in the abstract, is considered unpatentable subject matter. (citations omitted)". The court also recognized that:

Since the process of manipulation of numbers is a fundamental part of computer technology, we have had to reexamine the rules that govern the patentability of such technology. The sea-changes in both law and technology stand as a testament to the ability of law to adapt to new and innovative concepts, while remaining true to basic principles.

Applicant contends that the Board has already addressed an analogous situation in *In re Lowry*, 32 F.3d 1579, 32 USPQ2d 1031 (Fed. Cir. 1994) in which a data structure on a computer medium was expressly found to recite patentable subject matter by the Board and acknowledged

by the Federal Circuit in rendering its holding that a printed matter rejection did not apply to data structures, as claimed in Lowry. So to here, Appellant's claim 1, which calls for: "A user interface for a fare rule summary tool, the user interface displayed on a monitor . . . , " recites patentable subject matter since the interface is displayed on the monitor.

The Examiner's finding that "claimed 'user interface,' is not operated, as argued, but is simply a display on a screen, with no functionality to be operated, and is seen to be nonfunctional descriptive material, not an article of manufacture." is not supported by the guidance expressed by the Federal Circuit in *In re Warmerdam*, 33 F.3d 1354, 31 U.S.P.Q.2d 1754 (Fed. Cir. 1994). In *Warmerdam*, the court found claims 1-4 and 6 were directed to a process that simply manipulated "abstract ideas" or "natural phenomena. In contrast, claim 5 was found statutory. Claims 1 and 5 are reproduced below:

1. A method for generating a data structure which represents the shape of [sic] physical object in a position and/or motion control machine as a hierarchy of bubbles, comprising the steps of:  
first locating the medial axis of the object and  
then creating a hierarchy of bubbles on the medial axis.
5. A machine having a memory which contains data representing a bubble hierarchy generated by the method of any of Claims 1 through 4.

In *Warmerdam*, the court held that claims 1-4 and 6 were directed to non-statutory subject matter, whereas claim 5 was clearly directed to statutory subject matter, even though it depended on claims 1-4, because it was directed to a machine. *Warmerdam*, 33 F.3d at 1360.

Thus, in *Warmerdam*, the Fed. Cir. found non-statutory subject matter directed to abstract ideas, statutory subject matter when tied to a machine. Here to, the display of claim 1 ties the interface to a machine, and therefore makes the combination of a display and interface statutory subject matter.

### **Prior Art Rejections**

#### Claim 1

The examiner misconstrues Appellant's argument with respect to claim 1 and Tanner. In Appellant's argument, Appellant pointed out that while "Tanner may be enabling for the subject

matter that Tanner sought to claim", it is not enabling for the subject matter claimed by Appellant. There is no contradiction in this argument. The examiner argues that:

The examiner finds the features of the claimed "fare evaluation result table" in Tanner, "... figures 4A and 4B are attached at line A. 4A, shows a fare results evaluation table with alternate itineraries (slices) for flights from DFW to FRA and with columns for fares (labeled Adult, Approx. Tax and Total) and a column labeled RULES which is seen to be a summary and rows with fares, further, 4B discloses fares (\$618) and more explicitly discloses fare rule summaries, which are the Fare base codes "QBNRNX QBNRNX,"

Applicant's language "a first one of rows and columns" and "a second one of rows and columns" is seen to be "at least one of a row or column" and as figure 4B displays both the fare (\$618) seen to be a first column and the fare rule summary (QBNRHX QBNRHX) seen to be a second column. Tanner is seen to disclose the claimed table.

Appellant has positioned Figs. 4A and 4B side by side as instructed by Tanner.

Appellant contends that Tanner still does not disclose "a fare evaluation result table that displays fare rule summaries for fares in slices of an itinerary, the fare evaluation result table having a first one of rows and columns representing fares and a second one of rows and columns representing the fare rule summaries."

The examiner contends that Tanner displays slices for flights from DFW to FRA. Appellant disagrees. Tanner displays different travel options for travel between DFW and FRA.

not slices.<sup>1</sup> The examiner contends that Tanner displays fares "... and with columns for fares (labeled Adult, Approx. Tax and Total)." Appellant also disagrees. What those columns display are prices, e.g., the monetary value ascribed to the travel option. One cannot tell from that price whether the price is the result of one fare or of the combination of more than one fare. However, the fares are not themselves displayed in Fig. 4A or Fig. 4B.

The examiner also states that Tanner displays: "... a column labeled RULES which is seen to be a summary and rows with fares, further, 4B discloses fares (\$618) and more explicitly discloses fare rule summaries, which are the Fare basis codes 'OBNRHX OBNRHX'"

Appellant contends that the examiner has not shown that "QBNRHX QBNRHX" are fare rule summaries. Appellant contends that they are booking codes as disclosed by Tanner.

In contrast, Appellant's Fig. 3 is reproduced below:

Fare	Price	Rate components, B3										Cmbx, B3					
		BT	FT	Adv	Min Max	Min	Max	BT	FT	Stn	Pen	A	B	C	D	E	F
40	CS BOS-PHL-MIL-NY	\$908															
40	TYB BOS-PHL-MIL-NY	\$809															
40	TAZ BOS-PHL-MIL-NY	\$799															
40	CD BOS-PHL-LIN-F	\$790															
40	CD BOS-PHL-ATL-F	\$737															
40	CD BOS-PHL-BR-BU-F	\$729															
40	US BOS-PHL-CIN-MIL-NY	\$710															
40	ZE BOS-PHL-MIL-NY	\$712															
40	CD BOS-PHL-BR-BU-MIL-NY	\$711															
40	CD BOS-PHL-CIN-MIL-NY	\$714															
40	TYB BOS-PHL-CIN-MIL-NY	\$714															
40	TAZ BOS-PHL-CIN-MIL-NY	\$714															
40	CD BOS-PHL-CIN-MIL-NY	\$715															
40	CD BOS-PHL-BR-BU-MIL-NY	\$715															
40	TYB BOS-PHL-BR-BU-MIL-NY	\$715															
40	TAZ BOS-PHL-BR-BU-MIL-NY	\$715															
40	CD BOS-PHL-BR-BU-MIL-NY	\$716															
40	TYB BOS-PHL-BR-BU-MIL-NY	\$716															
40	TAZ BOS-PHL-BR-BU-MIL-NY	\$716															
40	CD BOS-PHL-BR-BU-MIL-NY	\$717															
40	TYB BOS-PHL-BR-BU-MIL-NY	\$717															
40	TAZ BOS-PHL-BR-BU-MIL-NY	\$717															
40	CD BOS-PHL-BR-BU-MIL-NY	\$718															
40	TYB BOS-PHL-BR-BU-MIL-NY	\$718															
40	TAZ BOS-PHL-BR-BU-MIL-NY	\$718															
40	CD BOS-PHL-BR-BU-MIL-NY	\$719															
40	TYB BOS-PHL-BR-BU-MIL-NY	\$719															
40	TAZ BOS-PHL-BR-BU-MIL-NY	\$719															
40	CD BOS-PHL-BR-BU-MIL-NY	\$720															
40	TYB BOS-PHL-BR-BU-MIL-NY	\$720															
40	TAZ BOS-PHL-BR-BU-MIL-NY	\$720															
40	CD BOS-PHL-BR-BU-MIL-NY	\$721															
40	TYB BOS-PHL-BR-BU-MIL-NY	\$721															
40	TAZ BOS-PHL-BR-BU-MIL-NY	\$721															
40	CD BOS-PHL-BR-BU-MIL-NY	\$722															
40	TYB BOS-PHL-BR-BU-MIL-NY	\$722															
40	TAZ BOS-PHL-BR-BU-MIL-NY	\$722															
40	CD BOS-PHL-BR-BU-MIL-NY	\$723															
40	TYB BOS-PHL-BR-BU-MIL-NY	\$723															
40	TAZ BOS-PHL-BR-BU-MIL-NY	\$723															
40	CD BOS-PHL-BR-BU-MIL-NY	\$724															
40	TYB BOS-PHL-BR-BU-MIL-NY	\$724															
40	TAZ BOS-PHL-BR-BU-MIL-NY	\$724															
40	CD BOS-PHL-BR-BU-MIL-NY	\$725															
40	TYB BOS-PHL-BR-BU-MIL-NY	\$725															
40	TAZ BOS-PHL-BR-BU-MIL-NY	\$725															
40	CD BOS-PHL-BR-BU-MIL-NY	\$726															
40	TYB BOS-PHL-BR-BU-MIL-NY	\$726															
40	TAZ BOS-PHL-BR-BU-MIL-NY	\$726															
40	CD BOS-PHL-BR-BU-MIL-NY	\$727															
40	TYB BOS-PHL-BR-BU-MIL-NY	\$727															
40	TAZ BOS-PHL-BR-BU-MIL-NY	\$727															
40	CD BOS-PHL-BR-BU-MIL-NY	\$728															
40	TYB BOS-PHL-BR-BU-MIL-NY	\$728															
40	TAZ BOS-PHL-BR-BU-MIL-NY	\$728															
40	CD BOS-PHL-BR-BU-MIL-NY	\$729															
40	TYB BOS-PHL-BR-BU-MIL-NY	\$729															
40	TAZ BOS-PHL-BR-BU-MIL-NY	\$729															
40	CD BOS-PHL-BR-BU-MIL-NY	\$730															
40	TYB BOS-PHL-BR-BU-MIL-NY	\$730															
40	TAZ BOS-PHL-BR-BU-MIL-NY	\$730															
40	CD BOS-PHL-BR-BU-MIL-NY	\$731															
40	TYB BOS-PHL-BR-BU-MIL-NY	\$731															
40	TAZ BOS-PHL-BR-BU-MIL-NY	\$731															
40	CD BOS-PHL-BR-BU-MIL-NY	\$732															
40	TYB BOS-PHL-BR-BU-MIL-NY	\$732															
40	TAZ BOS-PHL-BR-BU-MIL-NY	\$732															
40	CD BOS-PHL-BR-BU-MIL-NY	\$733															
40	TYB BOS-PHL-BR-BU-MIL-NY	\$733															
40	TAZ BOS-PHL-BR-BU-MIL-NY	\$733															
40	CD BOS-PHL-BR-BU-MIL-NY	\$734															
40	TYB BOS-PHL-BR-BU-MIL-NY	\$734															
40	TAZ BOS-PHL-BR-BU-MIL-NY	\$734															
40	CD BOS-PHL-BR-BU-MIL-NY	\$735															
40	TYB BOS-PHL-BR-BU-MIL-NY	\$735															
40	TAZ BOS-PHL-BR-BU-MIL-NY	\$735															
40	CD BOS-PHL-BR-BU-MIL-NY	\$736															
40	TYB BOS-PHL-BR-BU-MIL-NY	\$736															
40	TAZ BOS-PHL-BR-BU-MIL-NY	\$736															
40	CD BOS-PHL-BR-BU-MIL-NY	\$737															
40	TYB BOS-PHL-BR-BU-MIL-NY	\$737															
40	TAZ BOS-PHL-BR-BU-MIL-NY	\$737															
40	CD BOS-PHL-BR-BU-MIL-NY	\$738															
40	TYB BOS-PHL-BR-BU-MIL-NY	\$738															
40	TAZ BOS-PHL-BR-BU-MIL-NY	\$738															
40	CD BOS-PHL-BR-BU-MIL-NY	\$739															
40	TYB BOS-PHL-BR-BU-MIL-NY	\$739															
40	TAZ BOS-PHL-BR-BU-MIL-NY	\$739															
40	CD BOS-PHL-BR-BU-MIL-NY	\$740															
40	TYB BOS-PHL-BR-BU-MIL-NY	\$740															
40	TAZ BOS-PHL-BR-BU-MIL-NY	\$740															
40	CD BOS-PHL-BR-BU-MIL-NY	\$741															
40	TYB BOS-PHL-BR-BU-MIL-NY	\$741															
40	TAZ BOS-PHL-BR-BU-MIL-NY	\$741															
40	CD BOS-PHL-BR-BU-MIL-NY	\$742															
40	TYB BOS-PHL-BR-BU-MIL-NY	\$742															
40	TAZ BOS-PHL-BR-BU-MIL-NY	\$742															
40	CD BOS-PHL-BR-BU-MIL-NY	\$743															
40	TYB BOS-PHL-BR-BU-MIL-NY	\$743															
40	TAZ BOS-PHL-BR-BU-MIL-NY	\$743															
40	CD BOS-PHL-BR-BU-MIL-NY	\$744															
40	TYB BOS-PHL-BR-BU-MIL-NY	\$744															
40	TAZ BOS-PHL-BR-BU-MIL-NY	\$744															
40	CD BOS-PHL-BR-BU-MIL-NY	\$745															
40	TYB BOS-PHL-BR-BU-MIL-NY	\$745															
40	TAZ BOS-PHL-BR-BU-MIL-NY	\$745															
40	CD BOS-PHL-BR-BU-MIL-NY	\$746															
40	TYB BOS-PHL-BR-BU-MIL-NY	\$746															
40	TAZ BOS-PHL-BR-BU-MIL-NY	\$746															
40	CD BOS-PHL-BR-BU-MIL-NY	\$747															
40	TYB BOS-PHL-BR-BU-MIL-NY	\$747															
40	TAZ BOS-PHL-BR-BU-MIL-NY	\$747															
40	CD BOS-PHL-BR-BU-MIL-NY	\$748															
40	TYB BOS-PHL-BR-BU-MIL-NY	\$748															
40	TAZ BOS-PHL-BR-BU-MIL-NY	\$748															
40	CD BOS-PHL-BR-BU-MIL-NY	\$749															
40	TYB BOS-PHL-BR-BU-MIL-NY	\$749															
40	TAZ BOS-PHL-BR-BU-MIL-NY	\$749															
40	CD BOS-PHL-BR-BU-MIL-NY	\$750															
40	TYB BOS-PHL-BR-BU-MIL-NY	\$750															
40	TAZ BOS-PHL-BR-BU-MIL-NY	\$750															

FIG. 3

40

It is evident that Tanner does not display fares. As shown in Appellant's FIG. 3, the fare has a unique code to identify the fare, e.g., "CO.BOS->PHL..OW,Y.", whereas, "price" is a monetary amount for the particular fare, which the examiner mischaracterizes as a fare. As also shown in

<sup>1</sup> See Appellant's specification page 5, line 11; page 5, lines 25-26; page 6, lines 21-23.

FIG. 3, the fare rule summaries are a set of columns that have entries for different applications of the fare rules to the fares. The examiner has not shown that either Tanner or the art in general view "price" as a "fares." Rather "fares" have a unique meaning, as disclosed in Appellant's specification.<sup>2</sup>

Accordingly, Tanner does not teach the features of claim 1.

#### Claims 2 and 29

In order to make obvious claims 2 and 29 the examiner turns to figure 3 from Tanner, which is similar to figure 4A, but, fails to show rows including fares and columns including rule summaries.

#### Claims 4 and 31

These claims deal with "combinability restrictions" not "combinability rules" as stated by the examiner. The examiner argues for claim 4 that "combinability rules are expressed as letters of the alphabet and that Tanner which discloses a fare basis "QBNRHX QBNRHX" does not teach that those letters of the alphabet are combinability rules." The Examiner explains that Tanner does teach "QBNRHX QBNRHX" as "combinability rules", by using Whitesage as: "a teaching reference to what the alphabetic codes."<sup>3</sup>

Appellant contends that now the examiner uses, "QBNRHX QBNRHX" as "combinability restrictions" when previously in claim 1 the examiner argued<sup>4</sup> that "QBNRHX QBNRHX" were the fare rule summaries. Appellant submits that they are neither, but points out that the examiner has vitiated his own argument, since "QBNRHX QBNRHX" cannot be both "combinability restrictions" as used in claim 4 and the fare rule summaries as the examiner used in claim 1.

<sup>2</sup> For example, database 20a can store the Airline Tariff Publishing Company database of published airline fares and their associated rules, routings and other provisions, the so-called ATPCO database. (Appellant's specification page 3, line 28 to page 4, line 2).

<sup>3</sup> Examiner's answer page 9.

<sup>4</sup> ... more explicitly discloses fare rule summaries, which are the fare basis codes "QBNRHX QBNRHX." (Examiner's Answer page 8).

The examiner has not provided any basis upon which Whitesage's letters and Tanner's letters have equivalent functions. Appellant had asked the examiner to show that the letter codes in each reference were ascribed to the same industry standard not that they are a well known standard in the industry. Contrary to the examiner's assertion, Applicant's specification does disclose sources of the values associated with applicant's letters.<sup>5</sup> While, the examiner may have used letters that have known values in the airline reservation arts, the examiner still has not shown that the references are using the same industry standards.

Therefore, in order for the examiner to properly combine Whitesage with Tanner, the examiner must show that Tanner subscribes to the "Prism Group Fare Dex" codes, described in Whitesage. Otherwise, the examiner's argument regarding translation of "QBNRHX" has no meaning. Moreover, while Whitesage discloses FAREDEX and assuming that a translation of "QBNRHX" could in fact be as described by the examiner, (which Appellant does not concede) "QBNRHX" as shown in Tanner does not meet the claim limitation of: "least one of the columns represents fare combinability restrictions." Indeed, even if "QBNRHX" is a fare combinability restriction, it is a restriction only on the depicted fare. "QBNRHX" as it is used by Tanner is not one of the columns that represents fare "combinability restrictions" on a set of fares, as required by claim 4.

#### Claims 5 and 32

Claim 5 limits claim 1, and requires that the fare evaluation result table has the fare rules organized into categories of fare rules, and cells of the fare evaluation result table contain a status that would correspond to pass, fail, or defer for the fares. The examiner argues that "Avl" (availability, a button (circle with a dot in it)) of Tanner is equivalent to a status of "pass" and that an Avl (availability) of "n/a" is equivalent a "fail."

Tanner does not disclose "n/a" in Tanner's specification as far as Appellant can see, and the "a button (circle with a dot in it)" is merely a depiction of a radio control button commonly employed on user interfaces. Tanner does disclose that:

---

<sup>5</sup> Fares and their associated rules are published by airlines and resellers, typically provided through an intermediary such as The Airline Tariff Publishing Company (ATPCO). (Appellant's specification page 1)

**IV. The available net fares are displayed in a sorted order (based upon lowest price).**

Each line of the net fares list has been evaluated for availability and for a potentially lower published price. Available published fare flights are displayed (if desired by the client), and are highlighted in the sorted order of the queue. If availability is found, a button at the end of a particular flight option is displayed which, when activated, displays a screen of outbound and return flights appropriate to the flight option.

Therefore, one can reasonably conclude that "Avl" is directed to whether or not the travel option is available, e.g., whether a seat can be sold on the flight, which has no relevance to a fare rule. However, assuming *arguendo* that Avl has something to do with a fare rule, Avl still does not address the feature of the fare rules organized into categories of fare rules, and cells of the fare evaluation result table contain a status that would correspond to pass, fail, or defer for the fares. The examiner's argument still does not address the claimed feature.

**Claims 15 and 36**

Appellant contends that Claim 15 distinguishes over Tanner '590 for the reasons discussed in the Appeal Brief and the examiner's argument regarding figures 4A-B, 8A and 7B and Avl as equivalent to a status of "pass" and "n/a" as equivalent a "fail" are totally without merit for the reasons discussed above.

**Claims 16 and 37**

Appellant's claim 16 is directed to the feature of determining whether the summary is complete, likely complete, partially complete or missing information.

The Examiner argues that Avl (availability, a button (circle with a dot in it)) of Tanner is equivalent to a status of "incomplete" and that an Avl (availability) of "n/a" is equivalent a (sic) incomplete."

Appellant contends that this argument is without merit, contradicts the arguments made by the examiner in claim 5 and still does not meet the claim language since, the claim requires the step of: "determining whether the summary is complete, likely complete, partially complete or whether the summary is missing information." No computer implemented step of determining is described or enabled by "a button (circle with a dot in it)" or the expression "n/a."

Claims 17 and 38

The Examiner is correct that a typographical error exists in claim 17. This will be corrected by Appellant after appeal. However, Claim 38, which has an analogous limitation as claim 17, does not have such error. Claim 38 requires: "represent the summary in a table where rows of the table represent fares and columns of the table represent rules or categories." On that basis where rows of the table represent fares, Appellant contends that claim 17 is distinguished over Tanner, since figures 3, 4A and 4B attached at line A neither disclose a fare since "(\$618)" is a price and is neither a fare nor fare rule summaries, for the reasons discussed above. Thus, Tanner neither describe nor suggest to: "represent the summary in a table where rows of the table represent fares and columns of the table represent rules or categories."

Appellant also contends that Tanner does not disclose claim 17 even with the typographical error.

For claims 19, 20 and 22-27 the examiner offers no answer to any of Appellant's arguments raised for those claims in the Appeal Brief.

Claims 18, 21 and 39

Claim 18 further limits claim 15 by reciting: "representing the summary in a table where rows of the table represent fares and columns of the table represent rules or categories, and applying a color to cells of the table with the color scheme signifying whether the cell corresponds to pass, fail, or defer status." The Examiner argues that: Tanner has an equivalent table, which Appellant contends is incorrect. The examiner also argues that: "Tanner further uses hyper links (the circles with dots in them, in the figures are graphic hyperlink buttons)." Appellant disagrees. Hyperlinks are not disclosed in Tanner either by the dots with circles or in the text.

The examiner uses Kirk as teaching "color, or a mix of text, graphics or hyperlinks, to distinguish the portions to attract the user's attention." However, Kirk is not seen as using color to delineate status, and in particular status of fare rule summaries. Moreover, the examiner has not shown why one of ordinary skill in the art would have been motivated to modify the dots with circles, which Appellant contends are radio buttons, by applying a color. As claim 18 is

written, it requires applying "a color to cells of the table with the color scheme signifying whether the cell corresponds to pass, fail, or defer status." Structurally these features do not read on applying color to a control, as suggested by the examiner's argument.

For these reasons, and the reasons stated in the Appeal Brief, Applicant submits that the final rejection should be reversed.

Please apply any charges or credits to Deposit Account No. 06-1050.

Respectfully submitted,

Date: 2/27/07

  
Denis G. Maloney  
Reg. No. 29,670

Fish & Richardson P.C.  
225 Franklin Street  
Boston, MA 02110  
Telephone: (617) 542-5070  
Facsimile: (617) 542-8906